

REMARKS

These comments are in response to the Office Action mailed March 18, 2003. Applicant expresses appreciation to the Examiner for careful consideration of the subject patent application. Claims 1-3, 6, 8, 10, 14-16, 21 and 22 remain under consideration in the application.

Claim Rejections - 35 U.S.C. § 112

Claims 1-3 and 6 stand rejected under § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner indicated that it is "not understood how the rotor 15 is teeterable."

The term "teeterable" indicates the capability of a rotor to exhibit teeter, as is known in the art. The specification addresses the teeterability of the rotors in a number of areas. For instance, the paragraph spanning pages 14 and 15, and the first full paragraph of page 15, in conjunction with the corresponding figures, describe in detail the teeterability of the upper and lower rotors. The Examiner is directed specifically to teetering pins 82 and 168 of FIG. 2, as well as the accompanying discussion of the teetering pins in the Detailed Description (at least pages 14-15 and 20).

The specification thus describes the teeterability of the rotors in such a way as to enable one skilled in the art to which it pertains to practice the invention.

Claims 8, 10, 14-16, and 21-22 stand rejected under § 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner indicated that it is not understood what is meant by "substantially the same." Applicant submits that the term "substantially" is well known to those skilled in the art to indicate "that which is largely, but not wholly, that which is specified." Moreover, performing a search for the phrase "substantially the same" on the USPTO web site produces a large number of results from the documents used by the office, including the classification of technology for examination, which clearly illustrates the meaning of the phrase, and that the meaning understood by the office is the same as intended here, that being of or pertaining to the essence of the thing; essential, material, and important to the comparison.

In the present case, independent claims 8, 14 and 21 each include the limitation of an upper and lower rotor having substantially the same diameters. For the record, Applicant stipulates that what is meant by rotors having "substantially the

same" diameters is that the upper and lower rotors have diameters that vary from each other by no more than 10%. This is offered to eliminate any ambiguity in the language. The specification illustrates the meaning of the phrase, showing upper and lower rotors having essentially the same diameters.

Claim Rejections - 35 U.S.C. § 102

Claims 1 and 6 (including independent claim 1) were rejected under 35 U.S.C. § 102(b) as being anticipated by Sweden Patent No. 172,026 to Cednas (Cednas).

Claim 1 includes the limitation of a first and a second teeterable rotor (emphasis added). The Cednas device clearly does not teach or suggest a rotocraft having first and second rotors, both of which have the ability to teeter. The upper rotor in the Cednas craft, as illustrated in FIG. 5, includes no structure which would allow the upper rotor to teeter. Accordingly, claim 1 is allowable over the Cednas reference.

Claims 8, 14, 21 and 22 (including independent claims 8, 14 and 21) stand rejected under 102(b) as being anticipated by Apostolescu.

Independent claims 8, 14 and 21 each include the limitation of an upper and lower (or first and second) rotor each having a respective diameter, the respective diameters being substantially

the same. The Apostolescu craft includes upper and lower rotors that clearly have diameters of substantially different sizes. As shown in FIG. 1, the diameter of the lower rotor of Apostolescu is on the order of 30% smaller than the diameter of the upper rotor.

In contrast, the claims of the present application set forth rotors of substantially the same diameter. As Apostolescu does not teach or suggest this limitation, independent claims 8, 14 and 21 are allowable over Apostolescu.

Claim Rejections - 35 U.S.C. § 103

Claims 2 and 3 stand rejected under 103(a) as being unpatentable over Cednas in view of German Patent No. 1,556,795 (Muller). Claims 10 and 16 stand rejected under 103(a) as being unpatentable over Apostulescu in view of Cednas. Claim 15 stands rejected under 103(a) as being unpatentable over Apostulescu in view of Muller.

As each of these claims depend from an allowable independent claim, as set forth above, they are each allowable over the cited references. As such, Applicant requests that the rejections be withdrawn and the claims passed to issue.

Turning to consideration of the application as a whole, the independent claims are patentable over the cited references and the art of record for the reasons set forth above. No cited

reference teaches or suggests the combination set forth in the claims. In fact, they teach away, each disclosing a larger rotor with cyclic blade pitch control, and a smaller rotor without cyclic blade pitch control (this can be confirmed by a study of each of the cases). In fact, of the prior art of record, none of the references disclose providing a coaxial rotor set with rotors having substantially the same diameter in combination with cyclic pitch control provided to only one of the rotors.

Thus, as discussed on page 6 of Applicant's previous response (and contrary to the Examiner's characterization of the same), for a period of over 70 years, the prior art consistently teaches that accepted wisdom is to provide a rotor set with:

- a) teeterable (tipable) upper and lower rotors, OR
- b) upper and lower rotors of the same size, with cyclic pitch control applied to:
 - i) none of the rotors (See German Pat. No. 750,975), OR
 - ii) to both of the rotors.

These teachings do not anticipate Applicant's claims, they teach away from Applicant's claims.

In the relevant case *In re Hedges*, the court found that proceeding contrary to accepted wisdom in the art is evidence of nonobviousness. (*In re Hedges*, 713 F.3d 7631, 743, Fed. Cir. 1986). Because the rotor configuration of the present invention is in contrast to the accepted wisdom in the art, it would not be

obvious to one skilled in the art to provide the combination set forth in the claims..

CONCLUSION

Applicant respectfully submits that, for at least the reasons set forth above, independent claims 1, 8, 14, and 21, as well as the pending dependent claims, are allowable over the cited references. Applicant urges the Examiner to withdraw the objections and rejections and to pass the case to issue.

Moreover, it is respectfully submitted that there are claims allowable which are generic to claims withdrawn from consideration. Reconsideration of said withdrawn claims upon allowance is requested.

The Examiner is encouraged to contact Clifton Thompson or Jason Jones at (801) 566-6633 if there are any questions amenable to resolution by telephone interview.

No extension of time in which to respond to the Office Action is necessary, nor have any new claims been added; therefore, no additional fee is due. The Commissioner is hereby authorized to charge any additional fee or to credit any overpayment in connection with this Response to Deposit Account No. 20-0100.

DATED this 19th day of May, 2003.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Clifton W. Thompson", with a long, sweeping horizontal stroke extending to the right.

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